

into a flat, round surface; tubes projecting from the upper part of the circumference; centre nearly plane."

Tubulipora penicillata? Turton's Lin. vol. iv. p. 615.

"*Hab.* On shells and stones, and shells from deep water; common from the Eddystone Lighthouse to the Deadman Point.

"It is calcareous and about a quarter of an inch in height; the upper portion is expanded into a flat head, having on its superior surface one or two rows of projecting tubes round the circumference; the centre is either plain or marked with a few irregular cells. The cells are distant from each other, with slightly oblique unarmed apertures. The under surface of the head is furrowed without cells, and sloped into the footstalk."

Flustra Peachii.

Spec. Char. "Encrusting; cells radiating; apertures oval, unarmed, with two punctures at each extremity.

Hab. "On dead muscle and oyster shells, in the Fowey River, off the Deadman Point: common.

"Encrusting, membrano-calcareous; cells ovoid, having their longest diameter in the axis of growth; at each extremity two minute apertures; apertures even and unarmed. The cells, which have a radiating distribution, appear somewhat confused from their radiating from so many points and intermingling with each other.

"This species was first found by Mr. Peach of Gowan in the Fowey River; since that time, in company with him, I have found it abundantly encrusting almost every cell dredged up from Mixtow to the mouth of the river. I have since found it in deep water west of the Eddystone and nine leagues south of the Deadman. Not being able to refer this to any described species, and having submitted it to a gentleman well versed in the subject, who has pronounced it new, I beg to give it the name of its discoverer."

From an examination of Mr. Couch's paper it is evident, as might have been looked for from the rocky nature of the coast, that the calcareous species of zoophytes are particularly abundant on the Cornish shore.

PROCEEDINGS OF LEARNED SOCIETIES.

ROYAL ACADEMY OF SCIENCES OF BERLIN*.

March 3, 1842.—M. Müller read a notice on some Pathologico-Anatomical Observations on Parasitical Forms made during a journey in Sweden in company with M. Retzius.

When occupied last August in Bohuslän in dissecting different sea animals, MM. Müller and Retzius had occasion to examine a dorse (*Gadus Callarias*) with a lean tail, which, according to the statement of the fishermen, was not eatable on account of sickness. The seat of the disease was the natatory bladder, in which was found a considerable quantity of a yellowish smeary matter without smell. Seen under the microscope it appeared of a very peculiar nature, containing

* From the 'Berichte der Akademie der Wissenschaften zu Berlin.' Communicated by W. Francis.

small bodies of from 0,00058–0,00068" in length, which resemble in form the ribless *Navicula*, or Agardh's *Frustulia coffeiformis*. They consisted of two plates (*Schälchen*) united in the centre by a granular substance. The bodies are at the commencement undivided, they afterwards split lengthwise, and are only held together by the granular substance; at last they appear to separate completely. They are formed in cells, in which several were found together. From this and from the want of silica in the plates, they are perfectly distinct from the *Naviculae* and similar infusoria: they appear to belong, together with the Psorospermia of fishes, to a peculiar section of parasitical, vegetative organic forms of specific structure.

The authors have also instituted some inquiry into the development of fungi in the lungs and air-cells of birds. It is not the mould in the lungs of birds just dead, described by Messrs. C. Mayer, Jäger, Heusinger, Theile, and still more recently by M. Deslongchamps, but flat fungous bodies of a firm and uncommonly tough substance. M. Deslongchamps evidently had them before him, they formed the substratum of the mould filaments, which were developed in the lungs and air-cells of a diseased asthmatical eider duck; but he is mistaken with regard to the principal thing, as he considers this disease as an albuminous exudation. The fungoid bodies have been observed once in Stockholm and once in Berlin under quite similar circumstances. The first case was that of a *Stryx nyctea* from Lapland, which lived a part of the winter in Stockholm, but became sick and short-breathed, and then died. It was dissected by M. Retzius. The preparation has been preserved a long time in the Anatomical Museum at Stockholm. The lungs and air-cells are everywhere covered with fungoid, flat, circular, whitish yellow bodies, which have concentric rings on the surface, are in general somewhat hollowed out in the centre, and sometimes provided with cup-shaped corpuscles on the surface, of very small size, measuring from one to two lines and more in diameter. They have a firm hold, but may be removed without injury to the mucous membrane. Several adjacent ones also join, and then have the outer rings in common. At two places the air-cells were thickly covered with confluent bodies from 1 to $1\frac{1}{2}$ line in depth, so that there was a continuous, firm, and almost cartilaginous layer. The second case observed in Berlin was that of an old marsh harrier, *Falco rufus*, which, after having been shot in this neighbourhood two years before, had been brought to the Zoological Museum. A student, M. Dubois, found several white, cup-shaped, flat bodies in the air-cells, and brought a piece of the ventral part of the trunk with the kidneys, which were lined with some of them, to the dissecting-room, asking what they could be. M. Müller could not perceive any structure in them. In Stockholm, last autumn, there was again an opportunity of inquiring into the structure, but it was not attended with success. The firm tough mass appeared under the microscope as if coagulated. M. Retzius since presented a half of the preparation to the Berlin Museum, which afforded M. Müller the opportunity of devoting a longer time to the microscopic investigation of these enigmatical bodies. They certainly possess some structure, but it is

not everywhere perceptible ; in many places, where fortunate sections were made, perfectly transparent and very minute ramified filaments in an amorphous substance were evident, of a nature so clearly vegetable, that they need but be seen to be convinced of such being the case. MM. Link and Klotzsch at once pronounced them to be vegetable. Still more doubtful are other less regular and thicker filaments, which are here and there ramified, and are characterized by their inflated margins ; they are also sometimes separated into single ball-shaped bodies. The vegetable nature of the disease is therefore not to be doubted. The mould filaments existing in two places on the confluent disease, which are nowhere else to be found on the hard surface, are evidently something secondary, as so often happens with regard to fungi. The mould filaments have no resemblance with the filaments in the interior of the disease, are thicker, and evidently articulated, which M. Deslongchamps overlooked ; in some spots, capitate asci may be seen, whose clavate ends are covered all round with green spores ; they are also found between the filaments. This mould is evidently an *Aspergillus*.

Organs of fructification were not perceived in the fungoid bodies ; the latter therefore remind us of the enigmatical *Sclerotia* : direct observations on the latter, namely, *Sclerotium semen*, and *complanatum*, showed however no agreement. *Dacryomyces stillatus* showed still less resemblance in the structure.

[The paper of M. Deslongchamps above alluded to appeared at p. 229. vol. viii. of this journal, and we then called the attention of our readers to the observations made by Mr. Owen in 1832, in his Notes on the anatomy of the Flamingo. In a subsequent number (56. p. 131) Mr. Yarrell communicated a notice of the observations of Col. Montagu on the same subject, which were published so early as 1813. All these observers seem to have overlooked the fungoid bodies on which the mould is developed.—ED. ANN.]

March 10.—M. Kunth read the first part of a treatise *On the natural group of the Liliaceæ taken in its widest sense*, in which his aim was to prove, that if the *Liliaceæ*, *Asphodeleæ* and *Asparageæ* of Jus-sieu are considered as mere divisions of a larger family, there is no reason to retain the *Melanthaceæ* and *Smilacææ* as distinct families. With this intention the author first reviewed these five groups, and defined their limits more accurately. The following are the results of the observations communicated.

The *Melanthaceæ*, which are characterized by the *antheræ extrorsæ*, divided pistil, and the capsular fruit, possess anatropous ovules. With the exception of *Colchicum* and *Bulbocodium*, in which they are hemianatropous, their embryo is very small, and lies hid in the albumen directly above the umbilicus ; in *Colchicum*, *Bæometra*, and *Ornithoglossum*, on the contrary, it is situated about a third of the periphery from the umbilicus. This family is divisible, according to the different nature of the anthers, stigmata, and fruit, into five groups, the *Colchiceæ*, (*Colchicum*, *Bulbocodium*, *Merendera*, *Monocaryum*, and *Weldenia* and *Leucocrinum* as doubtful), *Melanthææ* (*Androcymbium*,

Erythrostictus, *Melanthium*, *Anguillaria*, *Wurmbia*, *Bæometra* and *Burchardia*), *Tofieldiæ* (*Tofieldia* and ? *Pleea*), the *Heloniæ* (*Helonias*, *Chamælorium*, *Xerophyllum*), and the *Veratreæ* (*Amianthium*, *Schæno-caulon*, *Asagræa*, *Veratrum*, *Zygadenus*, *Stenanthium* and *Anticlea*, a new genus formed of *Zygadenus glaucus* and *Melanthium sibiricum*). The *Uvulariæ* of Dr. A. Gray are distinguished from the *Melanthaceæ* merely by their coherent pistils, and it would perhaps be more suitable to consider them as a section. Besides the genera mentioned by Dr. A. Gray, there also belongs to this division *Krey-sigia*, Reichenb. (*Tripladenia*, Don), *Melanthium indicum*, which constitutes a separate genus, *Streptopus*, *Hekorima* and *Prosartes*, as well as *Drymophila* notwithstanding the *antheræ introrsæ*. But *Tri-cyrtis*, Wall., is excluded, and approached to the *Liliaceæ*.

The *antheræ introrsæ*, coherent pistils, and the flattened seeds which are provided with a winged margin, distinguish the *Liliaceæ* of Jussieu from the *Melanthaceæ*, to which they are in other respects very nearly allied. Bernhardt's two divisions are retained, but *Fritillaria*, on account of its anthers, which are fixed internally, is placed near to *Lilium*. *Orithyia* is most nearly related to *Tulipa*, *Rhinopetalum* on the contrary to *Fritillaria*. *Medeola* has anthers like *Lilium*, and must be considered as belonging to the same family notwithstanding the berries. *Methonica* is but a doubtful *Liliaceæ*, and approaches in many of its characters to the *Melanthaceæ*. The formation of the seed is here the same as in *Colchicum*, and it may be mentioned that Gærtner has figured and described the embryo of *Methonica* quite incorrectly. The seeds have an acrid taste.

The *Asphodeleæ* of Jussieu are very similar to his *Liliaceæ*, but may easily be known from the black testa. Mr. Brown unites with them those genera of Jussieu's *Asparageæ* which have a *testa atra crustacea*, and raises the rest by the name of *Smilaceæ* to a separate family, on account of the thin membranaceous nature of this organ. M. Kunth, on the contrary, thinks that the former, which should keep the name of *Asparageæ*, ought to be placed equal with the *Smilaceæ* in a natural arrangement. In the *Asphodeleæ* three sections have been formed, the *Hyacintheæ*, *Alliæ* and *Anthericeæ*. The latter have tufted roots; both the former, on the contrary, are bulbous. The *Hyacintheæ* flower in clusters, the *Alliæ* are umbellated. To the first, besides the genera enumerated by M. Endlicher, *Ledebouria*, the Indian representative of *Scilla*, belongs, and *Cælanthus*, Willd., which differs from *Lachenalia* by the spur-shaped prolongation of the calyx.

In most of the *Hyacintheæ* the sepals are one-nerved, and only *Cyanotris*, *Ornithogalum*, *Myogalum*, *Albuca* and *Uropetalum* are provided with three or more nerves. *Bellevalia* is enriched with new species, and *Agraphis* again united to *Scilla*. In reference to the last genus, M. Kunth calls attention to the great difference in the number of ovules in the individual species, and also makes the generic character of *Drimia* to depend on the loculi of the ovarium, containing at all times only two ascending ovules near each other.

The *Alliæ* include, besides *Allium*, the genera *Hesperoscordium*, *Triteleja*, *Brodiaëu*, *Calliproa*, *Tristagma*, *Leucocoryne*, *Milla* and *Bes-*

sera, and form, according to M. Endlicher, the greater part of his *Agapantheæ*, whilst *Allium* is enumerated amongst the *Hyacintheæ*. Perhaps *Tulbaghia* likewise belongs here. In *Bessera*, *Triteleja* and *Calliproa*, the sepals have three nerves on the back, whilst in all other *Alliæ* they appear to have one nerve. The true *Alliæ* have two upright campylotropous ovules fixed near to each other at the base of the loculus; in *Allium Victoriale*, on the contrary, they are isolated. *A. fragrans*, *euosmium*, *striatum*, *striatellum* and *canadense* possess four to twelve two-rowed hemianatropous ovules, and form a distinct genus, which perhaps coincides with *Hesperoscordium*.

The *Anthericeæ* have a true stem, a clustered or paniced inflorescence, and numerous more or less tuberosely thickened radicular fibres. *Eremurus*, *Asphodelus*, *Asphodeline* and *Bulbine*, again form in these a small separate group, characterized by the position of the ovules. These are from two to six in number, having the aperture turned downwards, and grown to the inner angle of the loculus, almost the whole of their length, and more or less surrounded with a fleshy arilloid protuberance. The sepals appear one-nerved. To these genera, *Kniphofia*, *Aloë* and *Lomatophyllum* join on very naturally. In the two first, and probably also in *Lomatophyllum*, the arilloid base of the ovules forms a loose membrane at a later period, which quite envelopes the seed, spreads in the form of wings to the margins, and has been falsely considered as the testa. Accordingly the *Aloëinæ* of Endlicher must fall to the ground, as of the two genera *Sansevieria* and *Yucca*, still reckoned amongst them, the first is distinguished from *Dracæna* merely by solitary ovules, and belongs to the *Asparagææ*; the second, on the other hand, comes nearer to the *Liliacææ*. *Hemerocallis*, *Czackia*, *Phalangium*, and all the remaining genera, which are considered by M. Endlicher as belonging to his *Anthericeæ*, have collectively anatropous ovules, and the sepals are furnished with three or more nerves.

To the *Conanthereæ*, which on account of the *Ovarium semi-inferum*, can hardly deserve to form a separate section of the *Anthericeæ*, besides *Zephyra*, *Conanthera*, *Cumingia* and *Pasithea*, *Cyanella* also belongs; but *Echeandia* must be removed and placed near to *Phalangium*. The latter likewise applies to *Anemarrhena*. *Sowerbæa* however does not belong here, but to Endlicher's *Aphyllantheæ*.

MICROSCOPICAL SOCIETY.

At a meeting of the Microscopical Society held July 20th, 1842, J. S. Bowerbank, Esq., in the Chair, a paper was read by Mr. John Quekett, "On the peculiar arrangement of the Blood-vessels in the Air-bladder of Fishes, and on the evidence they afford of the true function of that organ." The author, after alluding to three principal modifications of the air-bladder in fishes generally, went on to describe that of the cod-fish, which he stated to be a thick muscular bag without any opening externally, and provided on its ventral aspect with a highly vascular body, which has been supposed to perform the office of secreting the air contained in the bladder: the author described the minute arrangement of the vessels in this so-

called gland, the capillary system of which was composed of a great number of parallel vessels aggregated together in bundles, and forming loops on the free surface of the gland, and in the other part of the bladder the arrangement was also remarkable for the parallel manner in which the vessels were disposed; in this fish three, but in others as many as six, vessels ran parallel to each other. The fact of the air-bladder being subservient to the function of respiration was supported to a certain extent by the distribution found in the anterior compartment of the air-bladder of the eel; in this fish the vascular net-work approached more nearly that of the cellular lungs of the Batrachia than any other class of vessels. The author concluded by stating that the probable use of the gland in the closed air-bladders might be, not that of secreting air, but of keeping in a pure state the air already there, as those fish provided with a gland generally live in deep water, and from having no outlet to the bladder are unable to change the contents should they have become impure. The paper was accompanied with injected specimens and with diagrams of the most important parts alluded to by the author.

ENTOMOLOGICAL SOCIETY.

November 1, 1841 (*continued*).—W. W. Saunders, Esq., F.L.S.,
President, in the Chair.

Descriptions of the Australian species of Lamellicorn Beetles, belonging to the family of the Sacred Beetles. By J. O. Westwood, F.L.S.

After noticing the *Circellium hemisphaericum*, Latr., (Guérin, Icon. R. An. ins., pl. 21. f. 3.—*Coproëcus h.* Reich., Ann. Soc. Ent. France, 1842, pl. 5. fig. 2.), the *Aulacium carinatum*, Reich., (*Mentophilus Hollandiæ*, Laporte, Hist. Nat. Ins. Col. 2. pl. 4. fig. 4.), he describes the genus *Tessarodon*, Hope, in detail, giving characters of the type *At. Hollandiæ*, and of the two following new species:—

Tessarodon angulatus, W. *T. subovalis obscurè castaneus, capite et prothorace rudè punctatis, clypeo in medio dentibus duobus conicis, lateribus ante oculos valdè angulatis, tibiis posticis ad apicem appendiculatis.* Long. corp. lin. 3.—Hab. New Holland. Swan River? Mus. Hope.

Tessarodon piceus (Hope MSS.). *T. parvus subovalis castaneus, capite et prothorace rudè punctatis, capitis angulis ante oculos rotundatis, tibiis posticis simplicibus.* Long. corp. lin. 2½.—Hab. Port Essington. New Holland. Mus. Hope.

Descriptions are then given of the two following new genera:—

Cephalodesmius, W. *Clypeus in medio 4-dentatus, dentibus intermediis valdè elongatis. Palpi labiales, articulo 2do tumido, ovato, 3tio minuto. Prothorax magnus, 8-angularis, elytra subcordata. Pedes valdè elongati. Tarsi antici distincti, breves. Tibiæ intermediæ bicalcaratæ, posticæ 1-calcaratæ.*

Cephal. armiger, W. *Niger, capite nitido, punctato, pronoto subopaco, elytris opacis subsulcatis intra marginem lateralem acutè carinatis.* Long. corp. lin. 5.—Hab. New Holland. Mus. Soc. Ent. Lond., &c.

TEMNOPECTRON, W. *Corpus breve subrotundatum nitidum.* Clypeus in lobos duos minutos obtusos productus. Palpi labiales, articulo 2do obconico, 3tio præcedenti dimidio breviori. Prothorax lateribus rotundatis (et cum elytris subcontinuis) anticè parùm angustior. Tarsi antichi minuti. Tibiæ posticæ curvatæ intermediæ 2-, posticæ 1-calcaratæ. Ungues subtùs denticulo instructi.

Temn. rotundum. *T. nigrum, nitidum, tibiis anticis obtusè bidentatis, singulo elytro striis 8 tenuissimis, strid suturali punctatâ.* Long. corp. lin. 5.—Hab. Melville Island. Mus. Hope.

Descriptions of two new species of *Cremastocheilus*, from Northern India. By W. W. Saunders, Esq., F.L.S.

Cremastocheilus Campbellii, S. *Jet-black, somewhat glossy, antennæ and trophi somewhat piceous. Head elongate-quadrate, slightly emarginate, thorax orbicular, closely and deeply punctured. Mesosternum prolonged, elytra rather broader than the thorax, elongate, deeply punctured and rounded at the apex, legs long.* Length $\frac{6}{10}$ of an inch. Mus. Saunders.

Cremastocheilus brunneus, S. *Head subquadrate, narrowed in front; antennæ black. Thorax more orbicular, with a deep impressed line thickly and deeply punctured, and dark pitchy brown. Mesosternum terminating in a strong, somewhat curved hairy spine. Elytra rather broader than the thorax, elongate; apex angular, slightly punctured, dark brown; legs long, pitchy brown.* Length $\frac{5}{10}$ of an inch. Mus. Saunders.

[These two species enter into Burmeister's new genus, *Cænochilus*, all the species of which hitherto described are natives of Southern Africa.—J. O. W.]

In allusion to Mr. Hope's observations on the habits of the Australian *Coleoptera*, Mr. Edward Doubleday mentioned that he had observed with great surprise, when in North America, that several tribes of insects appeared to possess habits quite at variance with those of the European species of the same groups, *Ips* (for example) being coprophagous, and *Onthophagus* found under carrion.

December 6th.—W. W. Saunders, Esq., F.L.S., President, in the Chair.

Mr. S. Stevens exhibited British specimens of *Notaris Serpi*, a Curculionideous insect new to the British Fauna, which he had obtained from bullrushes at Hammersmith; also various other insects found in bullrushes, and a new species of *Omius* from Ascham Bryant, Yorkshire.

Captain Parry exhibited a small collection of *Coleoptera* from New Zealand, including a new genus of *Lucanida*, and many curious *Lonicornes*, upon which Mr. Hope made various remarks.

Mr. Westwood exhibited the Coleopterous portion of Mr. Coffin's collection of Mexican insects, and various insects from Sierra Leone from the collection of Mr. Raddon.

Mr. J. Gould exhibited a large and very beautiful wasp's nest, formed by *Vespa holsatica* in a glazed case, accompanied by a note from

Mr. Elliott, detailing the manner of its formation; the case having been placed on the top of a steam-boiler, and some portions of the comb containing grubs, and a number of perfect wasps having been introduced into the case, and an aperture formed at the back for the ingress and egress of the wasps which immediately covered in the grubs, and finished the nest in about five weeks. Mr. Hope stated that he had noticed that wasps are very partial to situations near to chimneys.

A cocoon of very beautiful silk resembling molten gold threads from the Philippine Islands was presented by H. Cuming, Esq.

The following memoirs were read:—

Descriptions of two new genera of *Curculionidæ*, closely allied to *Rhynchites*. By G. R. Waterhouse, Esq., of which the following are the characters:—

MINURUS, Wat. *Rostrum elongatum ad apicem dilatatum. Antennæ elongatæ tenues versus medium rostri insertæ, 11-articulatæ, articulis basalibus subæqualibus; 3bus ultimis remotis, clavam formantibus. Caput elongatum, collo crasso. Thorax subcylindricus basi apiceque truncatus. Elytra oblonga, abdomen tegentia.*

Minurus testaceus, Wat. *Testaceus, oculis nigris capite thoraceque punctatis, elytris profundè punctato-striatis.* Long. corp. lin. $1\frac{1}{6}$.—Hab. Chiloe.

METOPON, Wat. *Rostrum elongatum ad apicem subdilatatum. Antennæ tenues ad basin rostri insertæ, 11-articulatæ, articulis basalibus subæqualibus, tribus ultimis clavam subsolidam formantibus. Caput latum pone oculos paulld elongatum. Oculi laterales rotundati prominuli. Thorax transversus, basi apiceque truncatis. Elytra oblongo-ovata, humeris subrectangulis.*

Metopon suturalis, Wat. *M. testaceus, punctatus, scutello nigro, elytris ad suturam nigricantibus.* Long. corp. lin. $1\frac{1}{3}$.—Hab. Van Diemen's Land.

Descriptions of a new species of *Parastasia*. By J. O. Westwood, F.L.S.

Parastasia rufo-picta, W. *Nigra nitida tenuissimè punctata, fasciâ irregulari ad basin singuli elytri, anticè biramosa, et posticè in medio latè emarginata, pygidio piceo, opaco.* Long. corp. lin. 11.—Hab. Sylhet, East India. Mus. D. Parry.

Notice of a hitherto unobserved character distinguishing the sexes in certain *Cetoniidæ*, consisting of a strong spine at the extremity of the lower lobe of the maxillæ in the females. By J. O. Westwood, F.L.S. (since published in the 'Annals of Natural History').

January 3rd, 1842.—W. W. Saunders, Esq., in the Chair.

The following memoirs were read:—

On *Aporocera*, a new genus of *Coleoptera* allied to *Clythra*, from New Holland. By W. W. Saunders, Esq.

APOROCERA, S. *Antennæ two-thirds of the length of the body, 11-jointed, the 3rd and following joints subtriangular, broad and flattened, the 5th being somewhat the largest and broadest. Thorax gibbous in front, as broad as the elytra. Body cylindrical.*

Ap. bicolor, S. Head red-brown; antennæ black; thorax smooth, shining, deep reddish-brown, with a transverse furrow. Scutellum and elytra black shining green, deeply and coarsely punctured in regular striæ, each elytron with a deflexed lateral humeral lobe; legs reddish-brown, with the tips of the femora and tibiæ, and the tarsi black. Length $\frac{1}{4}$ inch.—Hab. New South Wales. Mus. Hope.

Ap. apicalis, S. Head red-brown; antennæ rather shorter and more slender than in the preceding. Thorax red-brown, as broad as the elytra, with a wide transverse furrow. Scutellum and elytra red-brown, the latter deeply and coarsely punctured in regular striæ, with the apex black; each elytron with a deflexed lateral humeral lobe. Legs red-brown, with the tips of the femora and tibiæ, and the tarsi black. Length $\frac{1}{4}$ inch.—Hab. New South Wales. Mus. Hope.

Some account of the natural history of a fossorial hymenopterous insect from Port Lincoln, South Australia. By J. O. Westwood, F.L.S.

The insect in question is a new species belonging to the *Pompilidæ*, and apparently to that division of *Pompilus* allied to *Aporus* in the large size of the collar.

P. audax, W. *P. ater*, *pubescens*, *prothorace magno*, *quadrato*, *antennis albis*, *tibiis tarsisque fusco-albidis*. Long. corp. lin. $5\frac{1}{2}$.

Specimens of this insect in the pupa state (almost fully developed) were found in the cells, each of which was about an inch long and half an inch in diameter: several of these cells were attached together, and seemed formed of a succession of short transverse layers of a shining material which had dried into rounded or elongated nodules. It appeared evident that these nests had not been enclosed in a burrow, but were external, the materials having been brought from a distance; thus differing from the habits of the majority of the family. In one of the cells, the remains of a very large spider, which had evidently served as the food of the enclosed larva, were found.

Mr. Newport communicated extracts from various letters which he had received from Mr. Wheekes, of Sandwich, detailing a series of galvanic experiments whereby he had obtained specimens of *Acarus hystrix* (or *A. Crossii*) from mineral solutions acted upon by voltaic currents, in the same manner as Mr. Crosse had obtained the same insect. In this case distilled water had been used, the mineral had been previously submitted to a white heat, and the apparatus had been insulated by being placed in mercury; notwithstanding which a number of the *Acaris* had been produced. Mr. J. E. Gray stated that Mr. Children had also instituted a series of experiments at the British Museum precisely similar to those of Mr. Crosse, without obtaining a single *Acarus*.

February 7th.—W. W. Saunders, Esq., in the Chair.

Mr. Westwood exhibited two extremely rare British *Noctuidæ* from the collection of Mr. T. Reeves, Jun., of Carlisle; namely, *Agrotis cinerea*, a beautiful variety, with the ground colour of the

fore wings of a more fulvous brown hue than in Mr. Curtis's figure, the base darker, and the bar across the middle of the wing dark brown, the hind wings with a slight fascia running across them entirely; and *Graphiphora depuncta*, a species which had been hitherto doubtful as British.

The following memoirs were read:—

Descriptions of two new Coleopterous genera allied to *Cryptocephalus*, from New Holland. By W. W. Saunders, Esq.

MITOCERA, S. *Antennæ* $\frac{1}{2}$ as long again as the body, filiform, 2nd joint small, 3rd and 5th very long, equal, 4th half as long as the 3rd. *Eyes reniform*. *Head vertical*; *thorax subquadrate*; *body subelongate, flattened*.

Mitocera viridipennis, S. *Head light red-brown, with the crown and antennæ black*. *Prothorax red-brown, with slightly raised lateral margins, coarsely punctured*. *Scutellum and elytra dark shining blue-green, and irregularly punctured*; *apical margins red-brown*. *Legs black*; *femora red-brown*. Length $\frac{5}{10}$ inch. —Hab. Swan River. Mus. Hope.

DICENOPSIS, S. *Body short, robust, cylindrical*. *Antennæ short, not half the length of the body, subclavate, 3rd, 4th, and 5th joints slender and long, the remainder short, forming a kind of lengthened club*. *Head vertical*; *eyes reniform*. *Thorax rounded in front, very convex*.

Dicenopsis hæmatodes, S. *Shining brownish-red, deeply and coarsely punctured*; *clava of antennæ black-brown*; *legs brownish-red, apex of tibiæ and the tarsi black*. Length $\frac{7}{10}$ inch.—Hab. New Holland and Van Diemen's Land. Mus. Hope and Westwood.

Descriptions of some new *Longicorn* and *Rhynchophorous* Beetles from the Philippine Islands. By G. R. Waterhouse, Esq.

Doliops (Waterh.) *geometrica*, Wat. *D. splendide viridi-æneus, capite lineis tribus; thorace lineis marginalibus et supra tribus (und abbreviatâ) notato; elytris lineis duabus transversis mediis; areâque transversâ basali irregulari; alterâque triangulari apicali lineis circumdatis, his lineis albo-squamosis*. Long. corp. lin. $6\frac{1}{2}$.

Pachyrhynchus rufo-punctatus, Wat. *P. niger, brevis, capite maculis tribus, thorace maculis duabus discoidalibus maculâque und ad utrumque marginem; elytris guttis 22 rufo-squamosis ornatis*. Long. corp. lin. $8\frac{1}{2}$. Nearly allied to *P. venustus*.

Pachyrhynchus elegans, Wat. *P. splendide cupreus, capite maculis 3, thorace 2 discoidalibus, undque ad utrumque marginem; elytris maculis 10 magnis subocellatis pallide viridi-squamosis*.

Pachyrhynchus latifasciatus, Wat. *P. splendide æneus, thorace fasciâ transversâ, elytris fasciis 2 (in medio interruptis) maculisque 3 apicalibus viridi-squamosis*. Long. corp. lin. 6.

Pachyrhynchus concinnus, Wat. *P. ater, elytris punctato-striatis; thorace medio lineâ transversâ lineâque longitudinali posticâ; elytris lineâ transversâ centrali, lineis duabus longitudinalibus, et lineâ marginali; his lineis pallide viridibus*. Long. corp. lin. 6. Resembles *P. chlorolincatus*.

Description of a new British genus of Apterous insect. By J. O. Westwood, F.L.S., &c.

The insect described in this paper had been already brought before the Society, (see Journal of Proceedings, November 2nd, 1840) when it was regarded by Mr. Westwood as an undeveloped *Myriapodous* insect. The researches of Mr. Newport upon the development of the *Myriapoda*, subsequently published, having shown the incorrectness of this opinion, Mr. Westwood refers the insect to the order *Thysanura*, (from all of which it differs generically) under the name of

CAMPODEA, W. *Corpus elongatum parallelum, depressum, molliusculum apterum 13-annulatum. Caput obovatum horizontale. Antennæ 2 elongatæ multiarticulatæ, submoniliformes. Os inferum mandibulis minutis planis latis 4-dentatis. Prothorax brevis, meso- et metathorax majores æquales. Pedes 6, elongati, cursorii. Abdomen segmentis subtus utrinque appendiculo minuto apiceque setis duabus elongatis setosis instructum.*

Campodea staphylinus, W. *Alba, mollissima, agilis, antennis articulis ultra 20 instructis. Long. corp. lin. 2½. Inhabits damp garden earth. Hammersmith, October 2, 1840. July 12, 1842.*

Catalogue of the entomological collections, with notes on the habits of the species found in Chusan and the adjacent parts. By Dr. Cantor.

BOTANICAL SOCIETY OF LONDON.

July 1, 1842.—J. E. Gray, Esq., F.R.S., President, in the Chair.

Numerous donations of plants, specimens of woods, &c., were announced, many of them purchased at the sale of the botanical museum of the late A. B. Lambert, Esq., and presented by some of the members. Mr. Arthur Henfrey (Curator) presented a monstrous specimen of *Scrophularia aquatica*, found by him on 30th June last on an island in the Thames above Teddington. The plant was about three feet high, having a flat riband-like stem, rather more than half an inch broad and scarcely an eighth thick. The flower-stalks grew chiefly out of the flat surfaces, nearly perpendicular to them, a very few only being at the edges and not in any regular order. These flowering-stalks extended over about eighteen inches of the stem, being about forty in number, exclusive of a very dense cluster at the summit of the plant. The flowers all appeared perfect, and the peculiarity of growth seemed to have resulted from a natural grafting of two plants.

Mr. T. Sansom (Librarian) exhibited a monstrous specimen of *Cynoglossum omphalotes* (Linn.), in which three peduncles were united longitudinally from the base to the extremity, terminated by two calyces; the first being 6-partite, bearing a corolla of six segments, five stamens, one pistil, and four seeds. The second 9-partite, formed from the uniting of two calyces respectively 4- and 5-partite, bearing two distinct petals placed side by side, each 5-lobed, and each with five stamens, and each containing one pistil and a set of four seeds.

Mr. Sansom also exhibited a specimen of *Galeobdolon luteum* (Smith), in which the terminal petal was salver-shaped, 5-lobed, stamens four.

A paper was read from Mr. T. Sansom, being "Notes of the First Excursion of the Members of the Society into Kent in June last; containing the habitats of the rarer species of flowering plants, and also notes on the most interesting specimens collected."

AMERICAN PHILOSOPHICAL SOCIETY.

Nov. 5, 1841.—The Committee, consisting of Dr. Horner, Mr. Wetherill, and Dr. Goddard, to whom Dr. Harlan's paper, entitled, "Description of the Bones of a Fossil Animal of the Order Edentata," was referred at the last meeting, made a report recommending its publication in the Transactions, which was ordered accordingly.

These bones form part of the extensive collection of fossils recently exhibited in Philadelphia by Mr. A. Koch, by whom they were obtained in Benton County, Missouri.

Among them, more or less perfectly preserved, are two ossa humeri, two tibiæ, two portions of the radius, two of the clavicle, parts of several ribs, twelve vertebræ, a cubitus, twenty-four teeth, eight of them in their sockets, two fragments of a lower jaw, with two and three teeth *in situ*, two fragments of the upper jaw, five ungual phalanges, the sternum of four articulated pieces, and a part of the ilium and sacrum.

These specimens apparently belonged to three individuals of the same species. They were found, with portions of a mastodon, in company with numerous tropical vegetable remains. They are friable and light, not petrified, but destitute of animal matter.

The teeth are very similar in structure to those of the *Megalonyx*, though the pieces of the lower jaw are stouter: the jaws may have contained six or seven teeth on each side.

The largest os humeri is twenty inches long and fourteen in diameter; it is of a massive structure, and deeply grooved by the muscular attachments. In place of a foramen, as in the humerus of the *Megalonyx*, the exterior surface, near the elbow joint, has a deep groove, for the origin of the flexor muscles. The condyles are of great breadth, as in the *Megatherium*. The inferior articulating surface consists of two facets, one exterior and convex, the other described by Dr. Harlan as concavo-convex, admitting a ginglymous and rocking motion.

The cubitus or ulna is a short and strong bone, with strong marks of muscular attachments: this was part of an animal of less size than that to which the large humerus belonged. A peculiarity of this bone consists in the position of its superior articulating surface, which is nearly in the middle of its shaft; the olecranon process being very long, and extending upwards. The lower articulating surface was articulated with the carpal bones, as well as the radius. The total length of this bone is sixteen inches.

There are four claws, or phalangeal bones of the fore-foot of a small-sized individual: in general form these bones approach nearest to those of the *Orycteropus*.

There are two tibiæ belonging to different individuals of different sizes: one is ten inches five-tenths in length, the other ten inches. This is a short, thick and strong bone. Its upper articulating surface is nearly a circular concave disc. Its lower anterior extremity is marked by a peculiar deep ovoid depression or hollow, for the reception of a corresponding hemisphere, projecting upwards from the astragalus, forming together a structure of joint altogether unique. The motions of the ankle joint were rotatory, but the articulating surface of the lower aspect of the astragalus admitted of ginglymous motion with the os calcis.

The clavicle and ribs, portions of which only exist, are not distinguished by any remarkable characters: but the foramen for the passage of the spinal marrow, in the vertebræ, is exceedingly small, an unaccountable feature in a skeleton, which in all other respects demonstrates great physical strength as one of its most remarkable characteristics.

The portion of sternum belonged most probably to the largest of the three individuals; the animal being apparently less than the *Megatherium*, and larger than the *Megalonyx*.

Dr. Harlan proposes to name this animal "*Orycterotherium Missouriense*."

MISCELLANEOUS.

LYMPH-GLOBULES OF BIRDS.

It is well known that the blood of vertebrate animals contains, besides the red discs, a few pale globules, which have commonly been regarded as those of lymph. But in birds I have found that the majority of the globules of the juice of the lymphatic glands are rather smaller than the pale globules of the blood, and the same fact is observable in mammals; yet the descriptions since Hewson's time of the lymph-globules of birds have always been drawn from the pale globules of their blood.

This distinguished man states that the particles of the fluid of the lymphatic glands of birds are oval, like the nuclei of their blood-corpuscles. In the 'Phil. Mag.' for February 1840, I described the lymph-globules of the Napu Musk Deer as hardly differing from those of Man, although the blood-discs of this little ruminant, as I had discovered and described in November 1839, are the smallest yet known; and although the *Camelidæ* have oval blood-discs, I found that the globules in the juice of the thymus and of the lymphatic glands, and of the pus of these animals, had the usual circular figure and nearly the same size as the corresponding globules of other Mammalia. [See Med. Chir. Trans. vol. xxiii.] It was to be expected, therefore, that the lymph-globules of birds would have a similar form; and such is the case, as I have lately ascertained. In a few instances from one